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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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06/20/2006

Rainer Brill

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7590

10/15/2008

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EXAMINER

BROWN, PHYLLIS M

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/549,834	Applicant(s) BRILL ET AL.	
	Examiner MACADE BROWN	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/16/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-18, 22-28, 30, 32 and 33 is/are rejected.
- 7) ☒ Claim(s) 19-21 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/25/06 & 09/16/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is responsive to the amendment filed on September 16, 2005. As directed by the amendment: claims 1-14 have been cancelled, and claims 15-33 have been added. Thus, claims 15-33 are presently pending in this application.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15 and 33 recite “springs” in lines 20 and 19, respectively. Furthermore, claims 15 and 33 recite the limitation "the vent opening" in lines 18 and 17, respectively and also recite “the housing” in lines 17 and 16, respectively. There is insufficient antecedent basis for this limitation in the claim. It is unclear one or two springs are being claimed. It is also unclear if “the housing” of lines 17 and 16 is the same as “a cup-shaped housing” in lines 19 and 18. Likewise, it is unclear if “the vent opening” in lines 18 and 17 is the same as “a throughgoing vent opening” in lines 23 and 22.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-18, 22, 23, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (3, 914, 528) in view of Herz (5, 937, 893).

Regarding claims 15, 16, 17, 18, and 23, Johnson discloses a pressure-relief valve having a casing 11 (fig. 1) including: a flange 22 formed with a throughgoing port 24, means for 19 securing the flange 22 to the casing 11, a seal 29 surrounding the port 24, a spring plate 34 spaced outward from the port 24, a rigid post 35 secured directly to the spring plate 34 and to the flange 22, and fixing the spring plate 34 relative to the flange 22, a valve body 31 between the plate 34 and the flange 22 and displaceable between a closed position, engaging the seal 29 and closing the port 24, and an open position spaced outward from the port 24, and permitting flow out of the casing 11 through the port 24; a spring 32 having an outer end bearing against the spring plate 34, and an inner end bearing against the valve body 31 to urge the valve body 31 into the closed position, whereby when pressure in the casing 11 exceeds a predetermined limit, the valve body 31 is pushed out and fluid in the casing 11 can pass through; the spring

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plate 34 subdivides an interior of the housing into an inner compartment, holding the valve body and spring and into which the port opens; an indicating member fixed on the valve body and projecting through the spring plate, a switch actuatable by the indicating member; wherein the indicating member 54 is a pin.

Johnson does not disclose the fluid in the casing can pass into a housing and out of the housing via a vent opening, a cup-shaped housing engaged over and covering the valve body, spring plate, post, and spring, the housing having an end wall spaced from the flange and a side wall projecting from the end wall toward the casing and forming a rim, the housing being formed with a throughgoing vent opening; and means for removably securing the rim directly to the flange, whereby removal of the housing exposes the spring plate, post, valve body, and spring; nor does Johnson disclose a separate outer compartment between the spring plate and the end wall, the vent opening being formed in the side wall at the inner compartment, whereby the spring plate blocks fluid flow from the inner compartment to the outer compartment; the indicating member projecting into the outer compartment and, a switch in the outer compartment; wherein the outer compartment is above the inner compartment; wherein the pin projects through the end wall of the housing.

However, Herz teaches fluid in the casing 121 (tank, fig. 5) can pass into a housing 36/212 and out of the housing via a vent opening 38/216 (figs. 1 & 8); the cup-shaped housing 36/212 (figs. 1 & 8) engaged over and covering valve elements, including a spring plate 20 (pressure relief device; fig. 8) and a post 56 (fig. 2), the housing 36/212 (figs. 1 & 8) having an end wall 46/232 spaced from a flange 214

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(adapter plate; figs. 8 & 9) and a side wall 37/234 projecting from the end wall 46/232 toward the casing 121 (fig. 5) and forming a rim; the housing 36/212 (figs. 1 & 2) being formed with a throughgoing vent opening 38/216 (figs. 1 & 8); and means 250 (fig. 9) for removably securing the rim to the flange 214, whereby removal of the housing 36/212 (figs. 1 & 8) exposes the valve elements, including a spring plate 20 (fig. 8) and a post 56 (fig. 2); further teaching a separate outer compartment between the spring plate 20 (fig. 8) and the end wall 46/232, the vent opening 38/216 (figs. 1 & 8) being formed in the side wall 37/234 at the inner compartment, whereby the spring plate 20 (fig. 8) blocks fluid flow from the inner compartment to the outer compartment; the indicating member 52 (fig. 1) projecting into the outer compartment and, a switch 34 in the outer compartment; where the outer compartment is above the inner compartment; wherein the pin 52 projects through the end wall of the housing 36/212 (figs. 1 & 8).

It would have been obvious, to employ in Johnson, a cup-shaped housing engaged over and covering the valve elements, wherein the spring plate subdivides an interior of the housing into an inner and outer compartment, with a throughgoing vent opening formed in the side wall, and securing means, securing the rim to the flange, as taught by Herz, for the purpose of containing and deflecting released fluids, conveying the fluids to a containment vessel for disposal, and to firmly fasten and hold down the enclosure (housing).

Regarding claim 22, Johnson discloses at least one stud (screw) on the spring plate 34 (fig. 1), the switch being mounted on the stud (col. 3, lines 16-18).

Regarding claim 32 Johnson discloses the seal 29 has a beveled annular seal face engageable with the valve body 31.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson and Herz, as applied to claims 15-18, 22, 23, and 32 above, in view of Reinach (588, 779).

Regarding claim 27, Johnson discloses what is essentially claimed, but does not disclose the flange is formed with a threaded bore having an inner end forming a seat and with a passage extending between the seat and an inner surface of the flange in the port, the valve further comprising a threaded valve member screwed into the threaded bore and being screwable between an inner position engaging the seat and blocking the passage and an outer position disengaged from the seat and unblocking the passage.

However, Reinach teaches a flange (fig. 2) formed with a threaded bore having an inner end forming a seat (c) and with a passage extending between the seat (c) and an inner surface of the flange in the port (a), further comprising a threaded valve member (c') screwed into the threaded bore and being screwable between an inner position engaging the seat and blocking the passage and an outer position disengaged from the seat and unblocking the passage to permit liquid to escape without necessitating the disconnecting of the pipes or the valve (col. 2, lines 64-73).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to employ in Johnson, a threaded bore with a passage and a threaded valve

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member screwed into the threaded bore, as taught by Reinach, for the purpose of permitting fluid to escape without disassembling the pipes or the valve.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson and Herz, as applied to claims 15-18, 22, 23, and 32 above, in view of Reinach with Crecca (2, 028, 754).

The modified Johnson valve discloses essentially the threaded valve member has a tip engageable with the seat, but does not disclose a bore having an outer end open outside the valve and an inner end open adjacent the tip, whereby, when the threaded valve member is screwed back off the seat, fluid can flow from the passage into the bore.

However, Crecca teaches a threaded valve member 54 (fig. 1) having a bore 56, an outer end open outside the valve and an inner end open adjacent the tip (outer end open outside of the valve when slightly unscrewed) to allow water collected to drain through the bore without disassembling of the valve.

It would have been obvious to one of ordinary skill in the art, at the time of invention, to employ in the modified Johnson valve, a bore having an outer end open outside the valve and an inner end open adjacent the tip, as taught by Crecca, for the purpose of draining collected water without disassembling the valve.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson and Herz as applied to claims 15-18, 22, 23, and 32 above, further in view of Voos (3, 310, 064).

Regarding claim 24, Johnson discloses essentially all claimed features, except wherein the pin has an outer end provided with a mushroom-shaped head.

Voos discloses a pin 24 (fig. 3) with an outer end 28 provided with a "mushroom-shaped" head, to ensure proper sealing.

It would have been obvious to one of ordinary skill in the art, at the time of invention, to employ in Johnson a pin with a "mushroom-shaped" head, as taught by Voos, for the purpose of ensuring sealing.

Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson and Herz, as applied to claims 15-18, 22, 23, and 32, and taken with Wood, Jr. (4, 944, 424).

Regarding claim 25, Johnson modified by Herz discloses essentially all claimed features, but does not disclose at least one pin displaceable transversely of the side wall in the flange between an outer position, projecting from the flange through a complementary hole in the housing side wall and an inner position, recessed in the flange; and a respective spring braced between the pin and the flange, and urging the pin into the outer position.

However, Wood, Jr. teaches a pin 39 (tab; fig. 2) displaceable transversely on the side wall of the flange 13 between an outer position, projecting from the flange through

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a complementary hole 21 in the side wall, and an inner position, recessed in the flange; and a respective spring 41 braced between the pin 39 and the flange 13, and urging the pin 39 into the outer position, wherein the cap maybe easily and quickly attached to the cylinder for enclosing an protecting the valved discharge opening, and removed from the cylinder for gaining access to the valve, further to provide simple construction and economic manufacturing (col. 2, lines 17).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to employ in Johnson as modified by Herz, a pin displaceable transversely of the side wall in the flange, and urging the pin into the outer position, as taught by Woods, Jr., for the purpose of providing easy and quick attachment, easy access, and simple construction and economic manufacturing.

Regarding claim 26, Johnson discloses the pin 44 has a rounded end.

Claims 29 and 30 rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson and Herz, as applied to claims 15-18, and 23 above, taken with Witt (328, 840).

Regarding claims 29 and 30, Johnson as modified by Herz, discloses essentially all claimed features, except wherein the vent opening is an array of small-diameter holes and wherein the vent opening is a horizontally extending slot.

Witt discloses the vent opening S (fig. 1) is an array of small-diameter holes that allow the stem entering the cylinder L is broken or disintegrated, muffling the steam, and preventing noise (col. 2, lines 86-90).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to employ in Johnson as modified by Herz, a plurality of holes, as taught by Witt, for the purpose of muffling and preventing noise.

The combination of Johnson, Herz, and Witt does not disclose the vent opening is a horizontally extending slot.

It would have been an obvious matter of design choice to modify the combination of Johnson and Herz, with the Witt's reference, to have a horizontally extending slot, since applicant has not disclosed that having horizontally extending slots solves any stated problem or is for any particular purpose and it appears that the device would perform equally well with either designs.

Allowable Subject Matter

Claims 19, 20, 21, and 31 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim 33 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MACADE BROWN whose telephone number is (571)270-5428. The examiner can normally be reached on Mon-Thurs, 8am-4:30pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on 571-272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. B./
Examiner, Art Unit 3753

/John Rivell/
Primary Examiner, Art Unit 3753